REMARKS

This response is intended as a full and complete response to the non-final Office Action mailed June 9, 2003. In the Office Action, the Examiner notes that claims 1-9 are pending of which claims 1-9 stand rejected. By this amendment, claims 1-9 continue unamended.

In view of the following discussion, the Applicants submit that none of the claims now pending in the application are non-enabling, anticipated, or obvious under the respective provisions of 35 U.S.C. §112, §102, and §103. Thus, the Applicants believe that all of these claims are now in allowable form.

Applicants are not acquiescing to the Examiner's statements as to the applicability of the prior art of record to the pending claims by filing the instant responsive amendments.

Applicants acknowledge and respect the obvious effort put forth by the Examiner when examining the subject application.

DRAWINGS

The Examiner has objected to the drawings "because there are numerous discrepancies between the reference numbers disclosed in submitted specification and applicants' submitted drawings." In particular, the drawings are objected to (1) as failing to comply with 37 C.F.R. 1.84(p)(5) because they include the following reference signs not mentioned in the description: "111H" of Figure 1, "704_2, 704_3" of Figure 7, and "1208" of Figure 12; and (2) as failing to comply with 37 C.F.R. 1.84(p)(5) because they do not include the following reference signs mentioned in the description: "562" of page 19, "900, 902" of page 15, and "1550" of page 22.

Applicants have amended the specification to include the reference signs shown in the drawings but not in the description (111H, 704_2, 704_3, and 1208), to correct reference sign errors (562) and to delete unneeded references signs (902 and 1550). Applicants have also attached a proposed amended drawing 9 that includes the reference sign 900 that is mentioned in the specification but not shown in the original Figure 9. As all of the reference signs are either shown in the originally filed drawings or provided in the original specification, no new matter is added. Applicants respectfully

request the Examiner to accept amended Figure 9 and to withdraw the drawing objections.

REJECTIONS

REJECTION OF CLAIMS UNDER 35 U.S.C. §103(a)

Claims 1-6, 8 and 9

The Examiner has rejected claims 1-6, 8 and 9 under 35 U.S.C. §103(a) as being unpatentable over Ludvig et al. U.S. Patent No. 6,415,437 ("Ludvig") in further view of Boice et al. US 2001/0001614 (Boice). Applicants traverse the rejections.

Regarding the rejection of claims 1-6, Applicants' claim 1 recites:

> "A method for encoding a user interface which comprises an information section and a display section, the method comprising:
> encoding a non-blank background for the information section; and
> skip encoding a blank background for the display section."
> (Emphasis added).

For prior art references to be combined to render obvious a subsequent invention under 35 U.S.C. §103, there must be something in the prior art as a whole which suggests the desirability, and thus the obviousness, of making the combination. Uniroyal v. Rudkin-Wiley, 5 U.S.P.Q.2d 1434, 1438 (Fed. Cir. 1988). Moreover, the mere fact that a prior art structure could be modified to produce the claimed invention would not have made the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992); In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

Nowhere in the combination of references is there any teaching, suggestion, or incentive to encode a non-blank background for an information section and skip encoding a blank background for a display section.

Ludvig discloses forming an interactive program guide by combining background information, video frame sequences, and program guide graphics into a single video frame sequence that is digitally encoded to form an MPEG (like) sequence. The same background is then used to form other video frame sequences having different program

guide graphics. The multiple video frame sequences are then sent in a single transport stream to a subscriber who can then scroll through the program guide.

Boice discloses a method of sending still pictures to a user such that pulsation artifacts do not occur. Boice specifically teaches identifying a still picture in a macroblock and then using that identification to set a parameter of an encode engine to prevent pulsations. In practice this reduces "noise" induced fluctuations by maintaining constant video information for the still picture.

Nowhere in Ludvig is there any teaching or even suggestion of skip encoding a blank background for a display section. The Examiner asserts (section 2 of the Office Action) that Ludvig is silent as to the means in which the IPG screen is compressed. Applicants respectfully wish to correct the Examiner: Ludvig teaches that the IPG screen is compressed by digitally encoding to form an MPEG (like) sequence. What Ludvig does not disclose or suggest is skip encoding a blank background for a display section. Consequently, Ludvig does not disclose or suggesting skip encoding a blank background for a display section while also encoding a non-blank background for an information section. Thus, Ludvig fails to teach or suggest the applicants' invention as a whole.

As Boice has nothing to do with sending an information section (display guide) along with a display section, Boice does nothing to bridge the substantial gap between Ludvig and the Applicants' invention. Boice teaches a method of removing noise from "still pictures" that have been identified in macroblocks. The subject invention does not relate to still pictures at all. Also, the section that the Examiner inferentially equates to a still picture has no noise to be removed since its original form is digital (produced by the guide data source 232 in Figure 2). Additionally, Boice et al. only suggests "skip encoding" a complete still picture. In contrast, the claimed invention skip encodes a blank background of a display section, which is not limited in any way to a still pictures (reference the video barker 120 of Figure 1). Applicants also submit that Boice does not even mention an information section, and thus does not suggest encoding a non-blank background for an information section.

Even if the references were operatively combined, the references would merely disclose imaging an information guide with a still picture in a display section. In that

case the still picture would be skip encoded, not a blank background. But, in fact, there is no suggestion in either Ludvig or Boice to make any combination that resembles the invention defined by claim 1. Additionally, one skilled in the applicable arts seemingly would have no particular reason to combine Ludvig, which has an information section, with Boice, which removes noise-induced pulsations from still pictures.

As such, the Applicants submit that claim 1, and claims 2-6 which depend from claim 1, are not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, the Applicants respectfully request that the 35 U.S.C. §103 rejection of claims 1-6 be withdrawn.

Regarding the rejection of claim 8, Applicants' claim 8 recites:

> "A method for encoding a user interface which comprises an information section and a display section, the method comprising:
> dividing the information section into macroblocks;
> forward transforming each macroblock to generate a transformed image;
> quantizing the transformed image to generate a quantized image; and
> encoding the quantized image to generate an encoded image of each macroblock,
> where the information section includes background stripes, and
> where the macroblocks do not cross any border between two adjacent background stripes." (Emphasis added).

For at least the emphasized reasons, claim 8 is allowable.

The foregoing discussion of Boice and Ludvig also apply to the rejection of claim 8.

The Examiner relies on Figures 5A-5C of Ludvig for showing an information section that includes background stripes where there is no cross between adjacent background stripes. However, the Examiner misunderstands claim 8. According to claim 8, a user interface has an information section with background stripes, and which is divided into macroblocks. However, those macroblocks have a special characteristic: they are formed such that they do not cross any border between adjacent background stripes. Thus, when encoding the information section that section is parsed into macroblocks that can be efficiently encoded.

As such, the Applicants submit that claim 8 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Therefore, the Applicants respectfully request that the 35 U.S.C. §103 rejection of claim 8 be withdrawn.

Regarding the rejection of claim 9, Applicants' claim 9 recites:

> A method for encoding a user interface which comprises an information section and a display section, the method comprising:
> forward transforming a source image of the information section to generate a transformed image;
> low-pass filtering the transformed image to generate a filtered image;
> quantizing the filtered image to generate a quantized image; and
> encoding the quantized image to generate an encoded image of the information section,
> where the information section includes background stripes, and
> where the low-pass filtering reduces visual defects from encoding of the background stripes. (Emphasis added)

For at least the emphasized reasons, claim 9 is allowable. Again, the foregoing discussion of Boice and Ludvig also apply to the rejection of claim 9.

The Examiner relies on Official Notice that low-pass filtering for the purpose of separating background information is notoriously well known in the art of video encoding when rejecting claim 9. However well-known low-pass filtering is in the art of video encoding, the Applicants are claiming low-pass filtering as such: they are asserting an invention in which low-pass filtering is one claim component. Neither Ludvig nor Boice disclose or suggest, alone or in combination, low-pass filtering to reduce visual defects from encoding of background stripes. As such, the applicants submit that claim 9 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Therefore, the applicants respectfully request that the 35 U.S.C. §103 rejection of claim 9 be withdrawn.

Claim 7

The Examiner has rejected claim 7 under 35 U.S.C. §103(a) as being unpatentable over Barret et al. U.S. Patent No. 6,412,112. Applicants traverse the rejection.

Regarding the rejection of claim 7, Applicants' claim 7 recites:

> A method for encoding a user interface which comprises an information section and a display section, the method comprising:
> forward transforming a source image of the information section to generate a transformed image;
> quantizing the transformed image to generate a quantized image; and
> encoding the quantized image to generate an encoded image of the information section,
> where said quantizing involves using a quantization matrix adjusted to better optimize display of text in the information grid. (Emphasis added)

The mere fact that a prior art structure could be modified to produce the claimed invention would not have made the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992); In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

Barret discloses a method of distributing formatted digital data with video content, which is formatted using a lossy (MPEG) compression technique. According to Barret, when video content is not being presented, the formatted digital data is sent.

When rejecting claim 7, the Examiner relies on Official Notice that a quantization matrix that is optimized for a variety of image or video types for the purpose of providing compressed data with a minimal loss of image quality is notoriously well known. Applicants assert that a quantization matrix that better optimizes the display of text in an information grid is both novel and unobvious. Applicants ask the Examiner to provide a reference that teaches using a quantization matrix for such purpose. Certainly, the Barret reference does not teach or suggest using such a matrix.

As such, the applicants submit that claim 7 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Therefore, the applicants respectfully request that the rejection be withdrawn.

CONCLUSION

The Applicants submit that none of the claims in the application is obvious under the provisions of 35 U.S.C. §103. Consequently, the Applicants believe that all claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Eamon J. Wall or John M. Kelly at (908) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

Dated: 7/9/03

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